

### AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** A vaccine composition suitable for administration to a vertebrate host which comprises:

(a) a polynucleotide vaccine component comprising at least one polynucleotide encoding at least one antigen, such that introduction of said polynucleotide vaccine component ~~formulation~~ into said vertebrate host results in expression of a biologically effective amount of said antigen or antigens so as to induce a prophylactic or therapeutic immune response;

(b) a protein antigen vaccine component comprising at least one protein antigen selected from the group consisting of model protein antigens and vaccine protein antigens; and

(c) a mineral-based, negatively charged adjuvant,  
wherein said mineral-based negatively charged adjuvant is preincubated or subsequently mixed with said at least one protein antigen vaccine component prior to formulating with said polynucleotide vaccine component.

2. **(Previously presented)** The vaccine composition according to claim 1 wherein said mineral-based negatively charged adjuvant is an aluminum salt or a calcium salt.

3. **(Previously presented)** The vaccine composition according to claim 2 wherein said aluminum or calcium salt is selected from the group consisting of aluminum phosphate, aluminum hydroxyphosphate, phosphate-treated aluminum hydroxide, calcium phosphate, calcium hydroxyphosphate, and phosphate-treated calcium hydroxide.

4. **(Currently amended)** The vaccine composition according to claim 1 wherein said group of model protein antigens range from acidic isoelectric point (IEP) proteins to alkaline IEP proteins.

5. **(Currently amended)** The vaccine composition according to claim 1 wherein said group of vaccine protein antigens comprises a surface protein or a core protein of Hepatitis B virus (HBV), a de-toxified toxin from the bacteria *Clostridium tetani* (a i.e. tetanus toxoid), a de-toxified toxin from the bacteria *Clostridium botulinus* (a i.e. botulinus toxoid), and/or ~~and~~ a de-toxified toxin from the bacteria *Corynebacterium diphtheriae* (a i.e. diphtheria toxoid).

6. **(Previously presented)** The vaccine composition according to claim 1 wherein said group of vaccine protein antigens comprises protein antigens derived from inactivated poliovirus.

7. **(Canceled)**

8. **(Previously presented)** A kit comprising a vaccine composition as defined in claim 1 in a unit dose form for administration to a vertebrate recipient.

9. **(Currently amended)** A method of using a mineral-based, negatively charged adjuvant as a component in a combined DNA/protein-based vaccine composition as defined in claim 1, comprising preincubating or subsequently mixing the mineral-based, negatively charged adjuvant with said at least one protein antigen vaccine component prior to being formulated with said polynucleotide vaccine component.

10. **(Currently amended)** A vaccine composition suitable for administration to a human host which comprises:

(a) a polynucleotide vaccine component comprising at least one polynucleotide encoding at least one antigen, such that introduction of said formulation into said vertebrate host results in expression of a biologically effective amount of said antigen or antigens so as to induce a prophylactic or therapeutic immune response;

(b) a protein antigen vaccine component comprising at least one protein antigen selected from the group consisting of model protein antigens and vaccine protein antigens; and

(c) a mineral-based, negatively charged adjuvant,  
wherein said mineral-based negatively charged adjuvant is preincubated or subsequently mixed with said at least one protein antigen vaccine component prior to formulating with said polynucleotide vaccine component~~The vaccine composition of claim 1, wherein the vertebrate host is a human host.~~

11. **(Currently amended)** A kit comprising a vaccine composition as defined in claim 1 in a unit dose form for administration to a human recipient~~The kit of claim 7, wherein the vertebrate host is a human host.~~

12. **(New)** A method for preparing a vaccine composition according to claim 1, wherein a mineral-based negatively charged adjuvant is preincubated or subsequently mixed with

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at least one protein antigen vaccine component prior to formulating with a polynucleotide vaccine component.